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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,884	03/04/2004	Nicholas Jordan	300200428-2	4790

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EXAMINER

MAYO III, WILLIAM H

ART UNIT PAPER NUMBER

2831

DATE MAILED: 04/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/791,884

Applicant(s)

JORDAN, NICHOLAS

Examiner

William H. Mayo III

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 March 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) *
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) .
Paper No(s)/Mail Date 3/4 & 11/05/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in present Application No. 10/791,884, filed on March 4, 2004.

Information Disclosure Statement

2. The information disclosure statements filed March 4, 2004 and November 5, 2004, have been submitted for consideration by the Office. They have been placed in the application file and the information referred to therein has been considered.

Drawings

3. The drawings are objected to because Figures 1-4 and 7-9 lack the proper cross-hatching which indicates the type of materials, which may be in an invention. Specifically, the cross hatching to indicate the conductor and insulation materials is improper. The applicant should refer to MPEP Section 608.02 for the proper cross-hatching of materials. Correction is required.

In addition to Replacement Sheets containing the corrected drawing figure(s), applicant is required to submit a marked-up copy of each Replacement Sheet including annotations indicating the changes made to the previous version. The marked-up copy must be clearly labeled as "Annotated Sheets" and must be presented in the

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amendment or remarks section that explains the change(s) to the drawings. See 37 CFR 1.121(d)(1). Failure to timely submit the proposed drawing and marked-up copy will result in the abandonment of the application.

Specification

4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

5. The abstract of the disclosure is objected to because in line 1 it contains the term "comprising", which is improper language for the abstract. Correction is required. See MPEP § 608.01(b).

6. The disclosure is objected to because of the following informalities: Throughout the specification there are misspelled words, such as "utilized" and "realizing". The applicant is required to replace all misspelled words with the proper spelling.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-10 and 12-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Schreiber et al (Pat Num 4,845,311, herein referred to as Scribeber). Scribeber discloses a flat flexible cable (Figs 1-19) having an composite structure (Col 1, lines 5-12 & 34-36). Specifically, with respect to claim 1, Scribeber discloses a flat flexible cable (8) comprising an elongated region of conductive material (60), an insulative material (14) surrounding the conductive material (60), first and second elongate flat conductors (75 & 76) sandwiching the insulative material (14) surrounding the elongate region of conductive material (60); first and second elongate flat insulators (top and bottom 82) on opposite sides of the first and second elongate flat conductors (75 & 76) to the insulative material (14) surrounding the conductive material (60); and a first conductive portion (26, 42, 17) interconnecting the first and second conductors (75 & 76) on a one side of the structure and a second conductive portion (27, 44, 19) electrically interconnecting the first and second conductors (75 & 76) on an opposite side of the structure to provide a coaxial cable (80), wherein the composite structure is flat and foldable without structural damage to the cable or its component parts (Col 1, lines 34-36). With respect to claim 2, Scribeber discloses that the first and second conductors (75 & 76) and the first and second portions (26-27, 42, 44, 17, 19) form a single conductive

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element (74, Fig 1). With respect to claim 3, Screiber discloses that the single element (26-27, 42, 44, 17, 19) forming the single element (74), comprise a conductive foil (Col 3, lines 21-24, i.e. 16 is the conducting layer before the layers 75 & 76 are formed).

With respect to claim 4, Screiber discloses that the cable (Figs 18-19) may comprise further first and second insulative portions (not numbered) positioned adjacent the first and second conductive portions (75 & 76) respectively, wherein the insulative portions (not numbered) are in contact with the first and second flat insulators (top and bottom 82 and all of the insulative portions are connected). With respect to claims 5-6, the first flat insulator (not numbered) and the first and second insulative portions (top and bottom 82) are a single element (top and bottom 82 and all of the insulative portions are connected). With respect to claim 7, Screiber discloses that the single element (26-27, 42, 44, 17, 19) forming the single element (74), comprise a conductive foil (Col 3, lines 21-24, i.e. 16 is the conducting layer before the layers 75 & 76 are formed). With respect to claim 8, Screiber discloses that the single element (26-27, 42, 44, 17, 19) forming the single element (74), comprise a mesh foil (Col 3, lines 21-24, after the vias are formed in layer 16 to form layers 75 & 76, the foil appears as a mesh, see Figs 4 & 5). With respect to claim 9, Screiber discloses that the first and second conductors (75 & 76) and the first and second portions (26-27, 42, 44, 17, 19) form a single conductive element (74, Fig 1). With respect to claim 10, Screiber discloses a flat flexible cable (8) comprising an elongated region of conductive material (60), an insulative material (14) surrounding the conductive material (60), first and second elongate flat conductors (75 & 76) sandwiching the insulative material (14) surrounding the elongate region of

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conductive material (60); first and second elongate flat insulators (top and bottom 82) on opposite sides of the first and second elongate flat conductors (75 & 76) to the insulative material (14) surrounding the conductive material (60); and a first conductive portion (26, 42, 17) interconnecting the first and second conductors (75 & 76) on a one side of the structure and a second conductive portion (27, 44, 19) electrically interconnecting the first and second conductors (75 & 76) on an opposite side of the structure to provide a coaxial cable (80), wherein the composite structure is flat and foldable without structural damage to the cable or its component parts (Col 1, lines 34-36) and wherein the insulative material (14) has a thickness between the conductive region (60) and the respective flat conductors (75 & 76) which is constant (Fig 1). With respect to claim 12, Scriber discloses a flat flexible cable (8) comprising an elongated region of conductive material (60), an insulative material (14) surrounding the conductive material (60), first and second elongate flat conductors (75 & 76) sandwiching the insulative material (14) surrounding the elongate region of conductive material (60); first and second elongate flat insulators (top and bottom 82) on opposite sides of the first and second elongate flat conductors (75 & 76) to the insulative material (14) surrounding the conductive material (60); and a first conductive portion (26, 42, 17) interconnecting the first and second conductors (75 & 76) on a one side of the structure and a second conductive portion (27, 44, 19) electrically interconnecting the first and second conductors (75 & 76) on an opposite side of the structure to provide a coaxial cable (80), wherein the composite structure is flat and foldable without structural damage to the cable or its component parts (Col 1, lines 34-36) and further comprising

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at least one terminal contact (at 81 & 87) consisting of a surface exposed by an opening (22) through a portion of the cable structure (Fig 1), wherein the surface being part of the one group of flat conductors (106). With respect to claim 13, Screiber discloses a method of manufacturing a cable (8) comprising providing an elongated region of conductive material (60), forming an insulative material (14) around the conductive material (60), providing a first and second elongate flat conductors (75 & 76) sandwiching the insulative material (14); providing first and second elongate flat insulators (top and bottom 82) on opposite sides of the first and second elongate flat conductors (75 & 76) to the insulative material (14) surrounding the conductive material (60); and providing a first conductive portion (26, 42, 17) interconnecting the first and second conductors (75 & 76) on a one side of the structure and a second conductive portion (27, 44, 19) electrically interconnecting the first and second conductors (75 & 76) on an opposite side of the structure to provide a coaxial cable (80), wherein the composite structure is flat and foldable without structural damage to the cable or its component parts (Col 1, lines 34-36) With respect to claim 14, Screiber discloses method wherein the at least some of the component parts (30, 75, 76) are consecutively stacked one on top of the other (Fig 1). With respect to claim 15, Screiber discloses a method wherein that the at least one component parts (75, 76) are provided by chemical deposition (Cols 3 & 4, lines 65-68 & 1-6, respectively). With respect to claim 16, Screiber discloses method wherein an opening (22) is provided through the cable structure (8) to form a terminal (at 81) consisting of an exposed surface of the flat

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conductor (106). With respect to claim 17, Screiber discloses a method wherein the opening (22) is formed by etching (Cols 3 & 4, lines 65-68 & 1-6, respectively).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schreiber (Pat Num 4,845,311) in view of Schmidt et al (Pat Num 6,486,394, herein referred to as Schmidt). Schreiber discloses a flat flexible cable (Figs 1-19) having an composite structure (Col 1, lines 5-12 & 34-36). Specifically, with respect to claim 1, Schreiber discloses a flat flexible cable (8) comprising an elongated region of conductive material (60), an insulative material (14) surrounding the conductive material (60), first and second elongate flat conductors (75 & 76) sandwiching the insulative material (14) surrounding the elongate region of conductive material (60); first and second elongate

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flat insulators (top and bottom 82) on opposite sides of the first and second elongate flat conductors (75 & 76) to the insulative material (14) surrounding the conductive material (60); and a first conductive portion (26, 42, 17) interconnecting the first and second conductors (75 & 76) on a one side of the structure and a second conductive portion (27, 44, 19) electrically interconnecting the first and second conductors (75 & 76) on an opposite side of the structure to provide a coaxial cable (80), wherein the composite structure is flat and foldable without structural damage to the cable or its component parts (Col 1, lines 34-36), wherein the insulative material (14) has a thickness between the conductive region (60) and the respective flat conductors (75 & 76) which is constant (Fig 1).

However, Schreiber doesn't necessarily disclose the first and second flat insulators having a thickness which is reduced at a pre-selected region along the cable (claim 11).

Schmidt teaches a flat flexible cable (Figs 1-11) having a composite structure which is simple and inexpensive to manufacture (Col 1, lines 48-55). Specifically, with respect to claim 10, Schmidt a flat flexible cable (Fig 4) comprising an elongated region of conductive material (10), an insulative material (25) surrounding the conductive material (10), flat conductors (23 & 33), wherein first and second elongate flat insulators (Fig 4) are on opposite sides of the conductor material (10), wherein the insulative material (25) has a thickness between the conductive region (10) and the respective flat conductors (23 & 33) which is reduced at a pre-selected region along the cable (Fig 4).

With respect to claim 10, it would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the flat flexible cable of Screiber to comprise the first and second flat insulators having a thickness which is reduced at a pre-selected region along the cable as taught by Schmidt because Schmidt teaches that such a configuration a composite structure which is simple and inexpensive to manufacture (Col 1, lines 48-55) and since it has been held that a change in form cannot sustain patentability where involved is only extended application of obvious attributes from a prior art. *In re Span-Deck Inc. vs. Fab-Con Inc.* (CA 8, 1982) 215 USPQ 835.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. They are Rimmer (Pat Num 6,320,133), Matsubaysshi et al (Pat Num 5,426,399), Lipponen (Pat Num 6,523,252), and Farquhar et al (Pat Num 5,847,324), all of which disclose various flat flexible cables.

Communication

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Mayo III whose telephone number is (571)-272-1978. The examiner can normally be reached on M-F 8:30am-6:00 pm (alternate Fridays off).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on (571) 272-2800 ext 31. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



William H. Mayo III
Primary Examiner
Art Unit 2831

WHM III
April 12, 2006